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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,297	06/01/2006	Yasuyuki Kenmoku	291280US3PCT	3688

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

WEDDLE, ALEXANDER MARION

ART UNIT	PAPER NUMBER
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1792

NOTIFICATION DATE	DELIVERY MODE
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06/10/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/581,297	Applicant(s) KENMOKU ET AL.	
	Examiner ALEXANDER WEDDLE	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection necessitated by amendment.
2. With regard to Claims 1 and 5, because Applicant has corrected informalities, Examiner withdraws objections to the Claims for informalities.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogasawara et al. (JP 2003-144990).

Regarding Claims 1-4, 6, and 8, Ogasawara et al. (JP'990) teach a coating method, comprising the steps of conveying an object to be coated in a predetermined conveying direction (Abstract), dividing the surface of the object into a number of coating areas, performing coating with individual sprayer units reciprocating along said coating areas substantially parallel to the conveying direction of said object (Abstract; par. 0011; Drawing 2), such that adjacent coating areas are coated by a different sprayer unit (par. 11). While coating the adjacent coating areas in the conveying direction (Drawing 2, elements T1R and T2R) the coating is performed while forming a coating trajectory of said turning paths like a series of steps (Drawings 1-2). At a first parallel transit path and at a last parallel transit path, the coating is performed while moving said sprayer units from the front to the rear side in said conveying direction, and the parallel transit paths for the reciprocation of each of said sprayer units are aligned substantially linearly in adjacent coating areas (Drawing 2).

JP'990 is silent as to changes in the positions of the terminal ends of the parallel transit paths. The claims are broad enough to read on transit paths whose terminal ends shift relative to the object being coated, because of the movement between the object being coated and the sprayer unit, even when transit paths have equal lengths

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relative to a stationary plane. It would have been obvious to a person of ordinary skill in the art at the time of invention that in practicing JP'990, successive turning paths would be expected to shift towards the back, whether on the front side of the boundary or the rear side of the boundary, ("from the front side to the rear side [relative to] the conveying direction") and that terminal ends and start ends would shift from the front side to rear side.

Regarding Claim 7, JP'990 is silent as to the geometry of the turning paths in relation to the transit paths. The claims are broad enough to read on transit paths whose terminal ends shift relative to the object being coated, because of the movement between the object being coated and the sprayer unit, even when transit paths have equal lengths relative to a stationary plane. It would have been obvious to a person of ordinary skill in the art at the time of invention that in practicing JP'990, successive turning paths would be expected to shift towards the back, and turning paths would not be perpendicular to the parallel paths relative to the object coated.

Regarding Claim 5, JP'990 suggests that the spray is cut (i.e., "turned off") during the return part of its trajectory (Abstract). JP'990 fails to teach that the coating is turned off at said turning paths for the reciprocation of the sprayer unit. It would have been obvious to a person of ordinary skill in the art at the time of invention modify the process of JP'990 by turning off the sprayer unit during the reciprocation of the sprayer unit at the turning path, because such person would have recognized that spraying during reciprocation would result in a coating streaky with vertical strokes and an accumulation of paint at the ends of the transit paths.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Asakawa, N. and Y. Takeuchi, "Teachingless Spray-Painting of Sculptured Surface by an Industrial Robot", Proceedings of the 1997 IEEE International Conference on Robotics and Automation (1997).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER WEDDLE whose telephone number is (571) 270-5346. The examiner can normally be reached on Monday-Thursday, 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on (571)272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/A. W./

Examiner, Art Unit 1792

/Michael Kornakov/

Supervisory Patent Examiner, Art Unit 1792